Energy-Service Contracts: Some Thoughts

Port Credit Memorial Arena is one of 10 community centres in Mississauga being managed by Petrosave Inc., an energy-service company. Savings are guaranteed on a base-year energy budget of $1.1 million.

Ontario
Ministry of Energy
Honourable Vincent G. Kerrio
Minister

Something for nothing. That's what the emerging energy-service contracting business promises. And, after some hesitation in Ontario, municipalities and, to a lesser extent, businesses and institutions are starting to listen. At last count, half a dozen Ontario municipalities had entered into energy-service contracts and several others are in the negotiation stage.

In any one contract, energy-service companies may combine any or all of a variety of services related to energy-conservation management – from financing and engineering to the purchase, installation and maintenance of equipment – into a single package. They do it for a piece – a potentially sizeable piece – of the energy savings realized for the client. Although it may not exactly qualify as "something for nothing," the promise of energy savings, along with free equipment, no capital outlay and minimal risk is, indeed, almost too good to be true.

Nevertheless, before the energy-service knot is tied, there are several matters that should be considered – from evaluating energy-service proposals to negotiating the contract and resolving contract disputes. For anyone considering the idea, the experiences of three municipalities and one business can be helpful. Two of the municipalities, Oshawa and Mississauga, are well into their seven-year contracts. Kingston is now negotiating an energy-service contract, and The Citadel General Assurance Company of Toronto recently signed one.

■ THE CITY OF MISSISSAUGA

In January 1984, following seven months of negotiation, the City of Mississauga's Recreation and Parks Department signed a seven-year agreement with Petrosave Inc. – the first comprehensive energy-service contract between a municipality and an energy-service company in Canada.

The deal covered electricity, natural gas, heating fuel, and water management for 10 of the city's community centres. Petrosave's responsibilities ranged from an energy audit to the purchase, installation and maintenance of a range of energy-conservation equipment, including a computerized monitoring and control system that links the individual systems in each community centre to one central control station. The equipment installed by Petrosave included a de-ionized water system for more efficient ice-making as well as thermostatic controls for heating, ventilation and air-conditioning. Furthermore, Petrosave agreed to maintain the equipment, train city staff to operate it and, finally, turn it over to the city on expiry of the contract.

The financial arrangements are centered on guaranteed savings from a base-year energy budget of $1.1 million. Mississauga pays Petrosave 12 instalments a year equal to the total of the base-year energy budgets for all the facilities, adjusted for increases in energy costs – less a guaranteed discount that will rise from 7 per cent in the first year to 13 per cent in the final year of the contract. Petrosave uses the money to pay the city's utility bills and counts on its efficient energy management to earn a profit from Mississauga's energy savings.

The results so far show an average reduction in energy consumption of 19 per cent in 1985 from the 1983 base year.

■ THE CITY OF OSHAWA

Even though Oshawa had the expertise to run their own energy-management program they found it made financial sense to sign an energy-service agreement.

Mississauga's energy-service contract has become a model for the province's municipalities. Oshawa's agreement, passed by city council in August 1984, resembles Mississauga's in most respects, including the company involved – Petrosave. The contract, working from a base-year energy budget of $890,000, extends for seven years and covers water management, electricity and natural gas for six recreation facilities and the city's civic administration building.

Oshawa's contract differs from Mississauga's in one major financial detail. Although; like Mississauga, Oshawa signed a guaranteed-savings agreement, it also chose to co-invest in the deal, paying Petrosave $100,000 up front. In return for the lump-sum payment, which helped Petrosave reduce its capital outlay, Petrosave raised Oshawa's guaranteed discount to 9-1/4 per cent in the first year, rising to 15-1/4 per cent in the last year of the contract. (The original agreement was for 6 per cent in the first year, rising to 12 per cent in the last year.) According to Ted Rytwinski, director of financial analysis and audit services for the Oshawa Treasury and Finance Department, the higher discount means about a 20 per cent return on the $100,000 invested. That, he says, "should be much more profitable than simply placing the money in our normal investment portfolio."

First-year results (February, 1985 to January 31, 1986) show an average reduction in energy consumption of 26 per cent from the city's base-year energy budget.

■ CITY OF KINGSTON

Kingston is now in the negotiation stage of a comprehensive energy-service contract. Its call for proposals in July, 1986 outlined a long-term agreement very similar to Mississauga's with respect to services and financial arrangements. Kingston is seeking equipment and services to improve the efficiency of water management, electricity, and natural gas usage for 28 municipal buildings, ranging from fire halls and public libraries to the city hall. The base-year energy budget for these buildings is just over $1 million.

■ THE CITADEL GENERAL ASSURANCE COMPANY

In August, 1986, an energy-service contract covering natural gas and electricity was signed between the Citadel General Assurance Company and Tamblyn, Black and McDonald Ltd. (TBM) of Toronto. TBM has agreed to install and maintain various energy-efficient equipment at the Citadel's 13-storey head-office building in downtown Toronto. Approximately 40 per cent of the building is occupied by Citadel staff, and the remainder is rented out to business and government tenants.

The Citadel will pay the building's utilities as usual, sending TBM the difference between those bills and the energy bills from the agreed upon reference year. In other words, TBM will use all the savings to pay off the investment. This results in a shorter term of agreement; hence the Citadel pays less interest and obtains all the savings sooner. At the end of the contract, according to Gary Palmer, the Citadel's manager of mortgages and real estate, the Citadel gets "an energy-efficient building and all the new equipment."

Since electricity charges amount to more than 80 per cent of the building's total energy bill, TBM will concentrate on saving electricity. An automated system will be installed to shut off the lights on each floor 15 minutes after regular office hours. Individual occupants, however, will be able to program the system for specific floors and parts of floors. Lighting reduction devices will be installed in many fluorescent fixtures, and others will be replaced with more efficient fixtures. A range of control measures for ventilation and air infiltration will also be adopted.

A fixed sum has been worked out for the equipment and services provided by TBM, and the contract runs until the company has realized that sum through the building's energy savings – with one major condition. The contract has a maximum length of 75 months. If TBM has not recouped its investment in that time, the Citadel has no further financial obligation. Since the Citadel is anxious to assume ownership of the equipment and its energy savings, however, Palmer says "it's in everybody's interest to save as much as possible as quickly as possible."

■ ENERGY-SERVICE CONTRACTS: THE APPEAL

For most municipalities, the appeal of an energy-service contract is obvious: energy efficiency through state-of-the-art equipment and management services plus, in most cases, guaranteed savings – and all with no capital outlay and no financial risk. "Manna from heaven" is the way Ed Preston, building maintenance foreman for the Kingston Parks and Recreation Department, calls the arrangement. The "something for nothing" refrain is echoed by most of his municipal counterparts, including those in such small municipalities as Barrie and Aurora, Ontario. Aurora, for example, signed a seven-year contract in December, 1984, based on a base-year energy budget of only $101,342.

Even municipalities with the financial means and expertise to run their own energy-management program seem to prefer an energy-service agreement. Before signing with Petrosave, Oshawa compared Petrosave's offer with the cost of doing the work internally. "After we calculated the cost of the energy audit, the engineer's drawings, the equipment, along with installing and monitoring it," says Rytwinski, "we felt we would have to achieve a 25 per cent reduction in our energy bill from the base energy budget just to break even with what Petrosave was offering. In the end, we said, 'why take any unnecessary risks ourselves.' "

"My incentive is the bottom line," says the Citadel Assurance's Gary Palmer, speaking for other businesses as well as the Citadel: "This building is getting older (it was built in 1977), and there's a lot of competition in the district for tenants. If we don't bring the building up to current energy standards, we risk either losing tenants or having to reduce rental rates to keep them."

And while Palmer says his company had the cash to cover the measures itself, it lacked the expertise to buy and install the equipment. "Besides," he says, "we have a lot of other places to invest our capital."

Competition for tenants was one reason the Citadel opted for an energy-service agreement to upgrade the building's energy systems, according to Gary Palmer.

■ GETTING APPROVAL

For many municipalities, it takes more time to get approval to negotiate an energy-service contract than to do the actual negotiating. Although the benefits of energy profit-sharing are quickly becoming recognized, some scepticism still exists. Rytwinski calls it a problem of perception and concedes that in Oshawa's case "a lot of people on the administrative side were suspicious." He adds, however, that at the time, only Mississauga had signed such an agreement. "Today," he says, "we're not dealing with promises and estimates but with proven technology and a proven service."

Although Mississauga may have been first to embrace the concept, the city is hardly new to energy conservation, having had an energy conservation committee since 1979. And the committee was well aware of the capabilities of

the latest technology, according to Bob Patterson, the city's energy conservation and building maintenance co-ordinator. It also helped, he says, that "even before we went into serious negotiation, we surveyed the managers of the 10 buildings that would be affected for their opinions. Without everyone's co-operation, the deal likely wouldn't have gone anywhere."

Bob Patterson, Mississauga, solicited the co-operation of all building managers before starting to negotiate an agreement.

It also helps to have an Ed Preston around. For more than a year, Preston almost single-handedly investigated, researched and, with the backing of Kingston's parks and recreation commissioner, championed the benefits of an energy-service contract for Kingston. Preston says that those municipalities that already had an energy-service agreement were extremely helpful, providing advice and even copies of their contracts and other information. Their help, he says, was instrumental in smoothing the way for Kingston's own energy service proposal.

Ed Preston in Kingston talked to other municipalities and hired an expert in building heating and cooling to get advice on selecting an energy-service company.

■ EVALUATING ENERGY-SERVICE PROPOSALS

To evaluate anything as complex and diverse as an energy-service contract, a wide range of skills are needed. Most of these skills, from financial to legal and purchasing, are available in the various departments of a municipality. But if they're not, says Kingston's Preston, "go out and get them." Which is exactly what Preston did.

"Most of our engineers are knowledgeable about roads and sewers," he says. "But we didn't have any experts in mechanical engineering, specifically somebody with a background in building heating and cooling." Turning to the engineering department at Queen's University in Kingston, Preston found the specialist he was looking for and hired him as a consultant. "I can sleep nights now," he says.

Once you've got the right team – most municipalities form an energy conservation committee to evaluate the proposals – the next step is deciding on the evaluation criteria. For Mississauga's Patterson, that wasn't overly difficult. "We wanted a contract in which the city didn't relinquish control of the facilities, because the number-one concern of the recreation and parks department is providing a service to the community. The second concern is providing it at the lowest cost. We were looking to achieve both."

Reliability was important to Oshawa. Rytwinski says the fact that Petrosave was backed by the Ontario Energy Corporation "helped sway us." But the biggest factors, he says, were money and service. "We wanted a company that would give us the most savings while handling all the buildings we wanted serviced."

Preston's major concern was what happens after the contract is finished. "Once the contract is over, then we have to maintain the equipment. I don't think we want to get involved with something too technical or too costly to maintain."

While the Citadel's financial and legal people reviewed TBM's proposed contract, the company did not formally evaluate the technical aspects of the proposal. "We would have had to hire engineering consultants for that," says Palmer, "and since many of the measures were common sense anyway, we decided we didn't need a second opinion. In effect, TBM was our consultant."

■ NEGOTIATING THE CONTRACT

Because of the importance Mississauga placed on maintaining control over its facilities and thus its service to the community, the city gave Petrosave "performance guidelines" stipulating minimum lighting for each building affected, as well as minimum and maximum temperatures for the buildings. As for the equipment, Patterson says that initially Petrosave asked for total management control of both new and existing equipment. "The city couldn't live with that," he says.

Patterson says the city negotiated "an override" into the contract, guaranteeing the city control over the operating hours of the equipment and the use of the buildings – "not only when something could be done but how. You don't want major maintenance taking place on a Saturday when a building is heavily used," he says.

Oshawa's contract was negotiated to give the city similar guarantees, says Rytwinski. "Our mechanical and maintenance people were brought in to help establish comfort levels and set-back times." As for maintenance, Rytwinski says that if Petrosave doesn't respond within a specified time, "we can bring in someone to do the work at their cost."

Similarly, the Citadel's contract guarantees minimum comfort levels for the occupants of its building.

Left to right. Barry Myers, Ted Rytwinski and Joe Farag of Oshawa's Treasury and Finance Department are pleased with the rate of return on their energy-management program — a 26 per cent reduction in energy consumption.

■ RESOLVING CONTRACT DISPUTES

Patterson says Mississauga put so much time and effort "into looking into every conceivable situation" that it has paid off: "We have had no major difficulties."

Rytwinski says that while "we've had a few concerns, we've been able to resolve them." When Oshawa renovated its arts resource centre, for example, the centre had to be heated by the boilers in the civic administration building. Since the arts resource centre was not included when Oshawa's base-year energy budget was worked out, the additional heating load meant additional energy costs for Petrosave. But, says Rytwinski, "we sat down with Petrosave and negotiated an equitable energy consumption level for the building, which was then added to the overall base-year consumption budget."

And if they hadn't been able to work out an agreement? "We have a provision in the contract for a mutually agreed upon impartial negotiator," says Rytwinski. There are similar provisions in both Mississauga's and the Citadel's contracts.

■ SUMMING UP

Rytwinski says it's essential that management involve the operating staff at the earliest stage. In Oshawa's case, operations managers were included in the city's energy conservation committee. "You have to convince the operating people that there are benefits to be gained, that jobs aren't being threatened," says Rytwinski. "It's difficult enough to have to tell someone who has been making ice or operating a boiler one way for 25 years that they're going to have to do it another way. You need their support."

He also advises municipalities to find out what subcontractors will be used by the energy-service company, since they'll be working closely with city staff. "In our case, it helped that a local company got the contract to install and maintain the equipment. They had already done some work for the city and had a good relationship with the staff."

Patterson stresses that the whole approach "is very complex and should be reviewed by each municipality in great detail" before anything is signed, a sentiment echoed by Kingston's Preston: "Do your homework. There are a number of municipalities out there involved in this now. You can learn a lot from their contracts. And the trial and error they went through."

As for Palmer, he's sitting on the fence, "until I see the results."

■ FOR MORE INFORMATION

The Association of Energy Management Analysts has completed a survey of Canada's energy-service contractors and the range of services they provide. The report is available by contacting:

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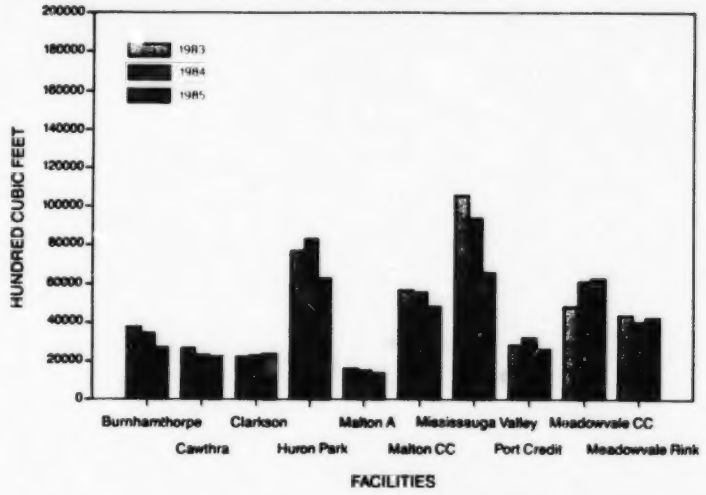

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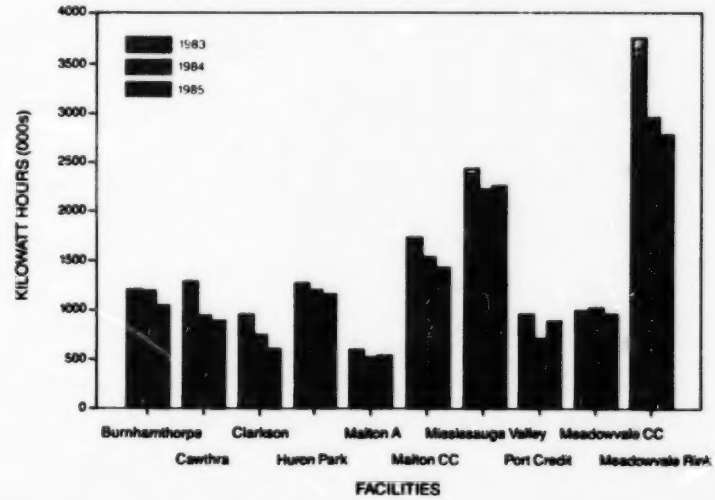

Mississauga has reduced energy use by 19 per cent on average in 1985 from the 1983 base year, in the 10 facilities managed by Petrosave.

For further information contact:

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